

Date: Tuesday, 11/6/2007 1:38:12 PM  
 User: Kim Johnston

## Process Sheet

Split Jan 2-21

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 35579-1  
 Estimate Number : 10829  
 P.O. Number :  
 This Issue : 11/6/2007 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : 11 Type : MACHINED PARTS  
 Previous Run : 33560  
 Written By :  
 Checked & Approved By :  
 Comment : Est: C 02.11.26 Reformat; Added P/O KJ  
 est D 06.04.19 removed alodine EC  
 Est Rev: E Added priming as per Rev B 07-04-30 JLM

Drawing Name : 02.750 SUPPORT  
 Part Number : D28931  
 Drawing Number : D2893 REV B  
 Project Number : N/A  
 Drawing Revision : B  
 Material :  
 Due Date : 12/13/2007 Qty: 20 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: 4996

Description: D6104-005

Material: 17-4 PH SS (AMS 5643 OR AISI 630) as per Dwg D6104

Material release note required.

C 207/11/07

(20)

y.w. l.w.

2.0 D6104005 17-4 SS Roundbar 4.00"OD



Comment: Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)  
 Support

J 08-0-08

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect for Transit Damage

Ensure Material Release Note is attached

20#6 0.01006 (20)

C 7/11/06

(20)

4.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

Turn blank for Haas as per Folio FA081

J 07.12.11

(19)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
07.12.14	4						

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 08/07/08  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)					
DATE	STEP	Description of NC Section A	Corrective Action Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng			
07.12.04	4.0	1 BLANK SCRAPED DUE TO NEW PROGRAM	OSIUM2	SCRAP BLANK.	OSIUM2 07.12.14	OSIUM2	07.12.19
		1 part scrap. while buffing to remove tooling marks on surface. Made part too thin → 0.132 → 0.130. R.C. human error	OSIUM2	1 part only scrap. destroy 02893-1 No replace	OSIUM2 07.12.18	OSIUM2	07.12.19

NOTE: Date & initial all entries



Date: Tuesday, 11/6/2007 1:38:12 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 02.750 SUPPORT

Job Number: 35579

Part Number: D28931

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

07-12-14

6.0

HAAS1

HAAS CNC VERTICAL MACHINING #1



Comment: BAND SAW

HAAS

Machine as per Folio FA081  
Tumble & Deburr

SA/gmk 08/01/06

(15)

7.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT ALL DIM TO DIM SHEET

SA/gmk 08/01/06

(15)

8.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SF 08/01/08

9.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3  
Mask Inside Bore for Priming

M106379

4J 08-01-14

(15)

10.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

Prime inside surface as per Dwg D2893 and QSI 005 4.3.

ZT 08 02 - 04 (15)

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

ZT 08 -02 -05 (15)

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: X TUBE PAINT + ASSY

ZT 08-02-05






+30 parts

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08-01-02	6.0	1 part had a <del>corner</del> inner corner taken down by the tool. 0.030"  R.C: Tool went down too far.	 08.01.02 per QSI 042	buff : tape to remove mark. 1 part only Acceptable THIS IS COSMETIC ISSUE ONLY	 08/01/02	 08-01-02	 08.01.02 per QSI 042	 08-01-02

NOTE: Date & initial all entries

Date: Tuesday, 11/6/2007 1:38:12 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 02.750 SUPPORT

Job Number: 35579

Part Number: D28931

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC21

FINAL INSPECTION/W/O RELEASE



(30)

Comment: FINAL INSPECTION/W/O RELEASE

2 08/02/08

Job Completion



in 2008/2/06 (30)  
W



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 35579
<b>Description:</b> Ø2.750 Support		<b>Part Number:</b> D2893-1
<b>Inspection Dwg:</b> D2893 Rev. B		<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2893 Rev B / DSK078 Rev A and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	17	218	219	4	By	Date
Lathe Section									
A	2.707	2.712		2.711	2.710	2.711			
B	4.946	4.966		4.958	4.956	4.956			
C	3.064	3.084		3.076	3.076	3.076			
D	0.718	0.738		.722	.723	.723			
E	0.090	0.110		.103	.103	.103			
F	2.934	2.954		2.945	2.945	2.945			
G	2.166	2.186		2.170	2.171	2.171			
H	3.890	3.910		3.903	2.903	2.903			
I	0.914	0.934		.930	.930	.930			
J	0.022	0.042		.037	.032	.032			
K	0.109	0.129		.116	.116	.116			
L									
* 1 HAAS Section 19									
AA	2.985	3.005		2.989	2.991	2.990			
AB	0.440	0.460		.450	.450	.450			
AC	0.125	0.160		.152	.147	.140			
AD	0.040	0.060		.041	.047	.040			
AE	0.188	0.193		.188	.188	.188			
AF	0.125	0.160		.140	.143	.140			
AG	0.140	0.160		.157	.144	.143			
AH	1.360	1.400		1.368	1.370	1.361			
AI	0.040	0.060		.053	.054	.053			
AJ	1.190	1.230		1.215	1.215	1.210			
AK	0.010	0.020		.015	.015	.015			
AL	0.053	0.073		.063	.063	.063			
AM	0.240	0.260		.250	.230	.250			
AN	2.518	2.538		2.530	2.530	2.530			
AO	84.39	90.39		87.39	87.39	87.39			
AP	0.261	0.266		.260	.260	.261			
AQ	0.053	0.073		.063	.063	.063			
AR									
AS									

Accept/Reject

Measured by: <i>G. J. / SD</i>
Date: 08/01/04

Audited by:
Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM <i>JA</i>	<i>JA</i>



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	35579
<b>Description: Ø2.750 Support</b>	<b>Part Number:</b>	D2893-1
<b>Inspection Dwg: D2893 Rev. B</b>		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2893 Rev B / DSK078 Rev A and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	13	14	15	16	By	Date
Lathe Section									
A	2.707	2.712		2.711	2.712	2.710	2.711	2.710	
B	4.946	4.966		4.952	4.955	4.958	4.956	4.956	
C	3.064	3.084		3.075	3.075	3.075	3.075	3.075	
D	0.718	0.738		.723	.723	.723	.723	.723	
E	0.090	0.110		.103	.103	.103	.103	.103	
F	2.934	2.954		2.945	2.945	2.945	2.945	2.945	
G	2.166	2.186		2.172	2.172	2.172	2.172	2.172	
H	3.890	3.910		3.902	3.902	3.902	3.902	3.902	
I	0.914	0.934		.930	.930	.930	.930	.930	
J	0.022	0.042		.032	.032	.032	.032	.032	
K	0.109	0.129		.117	.117	.117	.117	.117	
L									
HAAS Section									
AA	2.985	3.005		2.989	2.989	2.990	2.988		
AB	0.440	0.460		0.440	0.440	.440	.440		
AC	0.125	0.160		0.150	0.150	.140	.140		
AD	0.040	0.060		0.040	0.040	.040	.040		
AE	0.188	0.193		0.188	0.188	0.188	0.188		
AF	0.125	0.160		0.145	0.145	.145	.145		
AG	0.140	0.160		0.146	0.146	.145	.145		
AH	1.360	1.400		1.364	1.364	1.364	1.364		
AI	0.040	0.060		0.050	0.050	.050	.050		
AJ	1.190	1.230		1.209	1.213	1.213	1.213		
AK	0.010	0.020		0.015	0.015	.015	.015		
AL	0.053	0.073		0.063	0.063	0.063	.063		
AM	0.240	0.260		0.250	0.250	0.250	0.250		
AN	2.518	2.538		2.530	2.530	2.530	2.530		
AO	84.39	90.39		87.39	87.39	87.39	87.38		
AP	0.261	0.266		0.261	0.261	0.261	0.261		
AQ	0.053	0.073		0.063	0.063	0.063	0.063		
AR									
AS									

Accept/Reject

Measured by:	JLM
Date:	08/01/05

Audited by:	
Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 35579
<b>Description:</b> Ø2.750 Support	<b>Part Number:</b> D2893-1
<b>Inspection Dwg:</b> D2893 Rev. B	<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2893 Rev B / DSK078 Rev A and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	19	210	311	412		
Lathe Section									
A	2.707	2.712		2.710	2.710	2.710	2.710		
B	4.946	4.966		4.953	4.953	4.953	4.953		
C	3.064	3.084		3.075	3.075	3.075	3.075		
D	0.718	0.738		.722	.722	.722	.722		
E	0.090	0.110		.103	.103	.103	.103		
F	2.934	2.954		2.945	2.945	2.945	2.945		
G	2.166	2.186		2.177	2.177	2.177	2.177		
H	3.890	3.910		3.902	3.902	3.902	3.902		
I	0.914	0.934		.930	.930	.930	.930		
J	0.022	0.042		.032	.032	.032	.032		
K	0.109	0.129		.116	.116	.116	.116		
L									
HAAS Section									
AA	2.985	3.005		2.993	2.991	2.990	2.991		
AB	0.440	0.460		.450	.450	.450	.450		
AC	0.125	0.160		.150	.151	.147	.148		
AD	0.040	0.060		.045	.043	.0435	.045		
AE	0.188	0.193		.188	.188	.188	.188		
AF	0.125	0.160		.144	.145	.147	.147		
AG	0.140	0.160		.144	.144	.145	.144		
AH	1.360	1.400		1.371	1.369	1.369	1.370		
AI	0.040	0.060		.051	.049	.050	.051		
AJ	1.190	1.230		1.216	1.214	1.215	1.216		
AK	0.010	0.020		.015	.015	.015	.015		
AL	0.053	0.073		.063	.063	.063	.063		
AM	0.240	0.260		.250	.250	.250	.250		
AN	2.518	2.538		2.530	2.530	2.532	2.530		
AO	84.39	90.39		87.39	87.39	87.39	87.39		
AP	0.261	0.266		.260	.260	.260	.260		
AQ	0.053	0.073		.063	.063	.063	.063		
AR									
AS									
Accept/Reject									

Measured by: <i>[Signature]</i>	Audited by:
Date: 08/01/03	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	<i>[Signature]</i>



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 35579
<b>Description:</b> Ø2.750 Support		<b>Part Number:</b> D2893-1
<b>Inspection Dwg:</b> D2893 Rev. B		<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2893 Rev B / DSK078 Rev A and record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
<b>Lathe Section</b>									
A	2.707	2.712		2.710	2.715	2.710	2.710		
B	4.946	4.966		4.960	4.966	4.956	4.956		
C	3.064	3.084		3.075	3.075	3.075	3.075		
D	0.718	0.738		.722	.722	.722	.722		
E	0.090	0.110		.103	.103	.103	.103		
F	2.934	2.954		2.945	2.945	2.945	2.945		
G	2.166	2.186		2.172	2.172	2.172	2.172		
H	3.890	3.910		3.902	3.902	3.902	3.902		
I	0.914	0.934		.930	.930	.930	.930		
J	0.022	0.042		.032	.032	.032	.032		
K	0.109	0.129		.116	.116	.116	.116		
L									
<b>* 17 HAAS Section 3 4</b>									
AA	2.985	3.005		2.990	2.988	2.990	2.988		
AB	0.440	0.460		.450	.450	.450	.450		
AC	0.125	0.160		.140	.154	.142	.144		
AD	0.040	0.060		.044	.044	.043	.044		
AE	0.188	0.193		.188	.188	.188	.188		
AF	0.125	0.160		.138	.137	.139	.138		
AG	0.140	0.160		.151	.152	.150	.151		
AH	1.360	1.400		1.363	1.369	1.371	1.371		
AI	0.040	0.060		.054	.050	.051	.051		
AJ	1.190	1.230		1.212	1.215	1.217	1.218		
AK	0.010	0.020		.015	.015	.015	.015		
AL	0.053	0.073		.063	.063	.063	.063		
AM	0.240	0.260		.250	.250	.250	.250		
AN	2.518	2.538		2.530	2.530	2.530	2.530		
AO	84.39	90.39		87.39	87.39	87.39	87.39		
AP	0.261	0.266		.267	.267	.267	.267		
AQ	0.053	0.073		.063	.063	.063	.063		
AR									
AS									
<b>Accept/Reject</b>									

Measured by: <i>[Signature]</i>
Date: 07.12.14

Audited by: <i>[Signature]</i>
Date: 07.12.13

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	<i>[Signature]</i>



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 35579
<b>Description:</b> Ø2.750 Support	<b>Part Number:</b> D2893-1
<b>Inspection Dwg:</b> D2893 Rev. B	<b>Page 1 of 1</b>

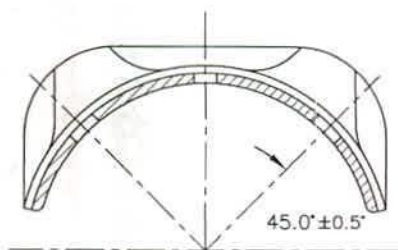
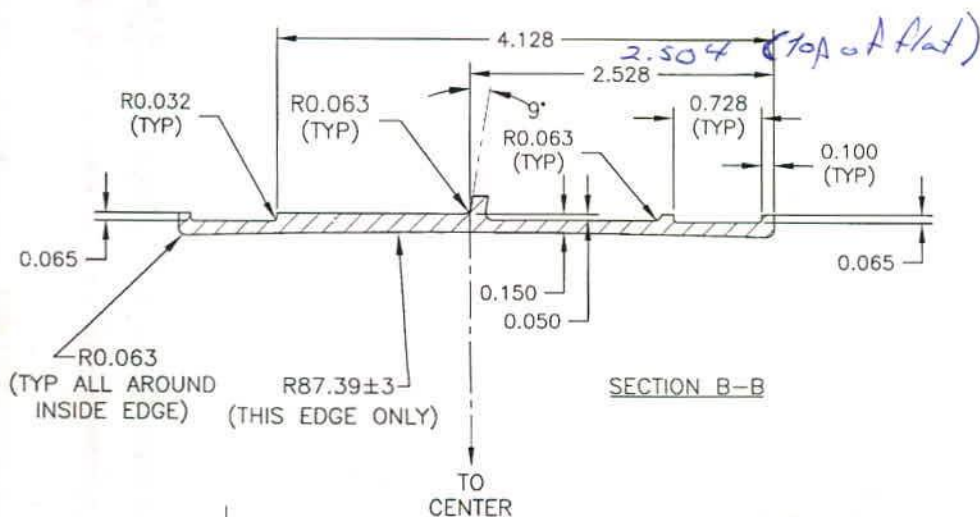
Inspect dimensions highlighted on inspection sheet drawing D2893 Rev B / DSK078 Rev A and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	5	26	7	48		
Lathe Section									
A	2.707	2.712	2.711	2.711	2.709	2.708	2.710		
B	4.946	4.966	4.957	4.957	4.956	4.956	4.954		
C	3.064	3.084	3.076	3.076	3.076	3.076	3.075		
D	0.718	0.738	.722	.722	.722	.722	.722		
E	0.090	0.110	.103	.103	.103	.103	.103		
F	2.934	2.954	2.945	2.945	2.945	2.945	2.945		
G	2.166	2.186	2.172	2.172	2.172	2.172	2.172		
H	3.890	3.910	3.903	3.903	3.901	3.901	3.901		
I	0.914	0.934	.930	.930	.930	.930	.930		
J	0.022	0.042	.037	.037	.037	.037	.037		
K	0.109	0.129	.116	.116	.116	.116	.116		
L									
HAAS Section									
AA	2.985	3.005		2.987	2.991	2.990	2.990		
AB	0.440	0.460		.450	.450	.450	.450		
AC	0.125	0.160		.151	.154	.153	.153		
AD	0.040	0.060		.057	.047	.057	.050		
AE	0.188	0.193		.188	.188	.188	.188		
AF	0.125	0.160		.140	.141	.140	.141		
AG	0.140	0.160		.146	.145	.146	.146		
AH	1.360	1.400		1.364	1.364	1.364	1.364		
AI	0.040	0.060		.057	.051	.057	.052		
AJ	1.190	1.230		1.216	1.217	1.218	1.216		
AK	0.010	0.020		.015	.015	.015	.015		
AL	0.053	0.073		.063	.063	.063	.063		
AM	0.240	0.260		.250	.250	.250	.250		
AN	2.518	2.538		2.530	2.531	2.530	2.530		
AO	84.39	90.39		87.34	87.37	87.39	87.39		
AP	0.261	0.266		.260	.260	.260	.260		
AQ	0.053	0.073		.063	.063	.063	.063		
AR									
AS									
Accept/Reject									

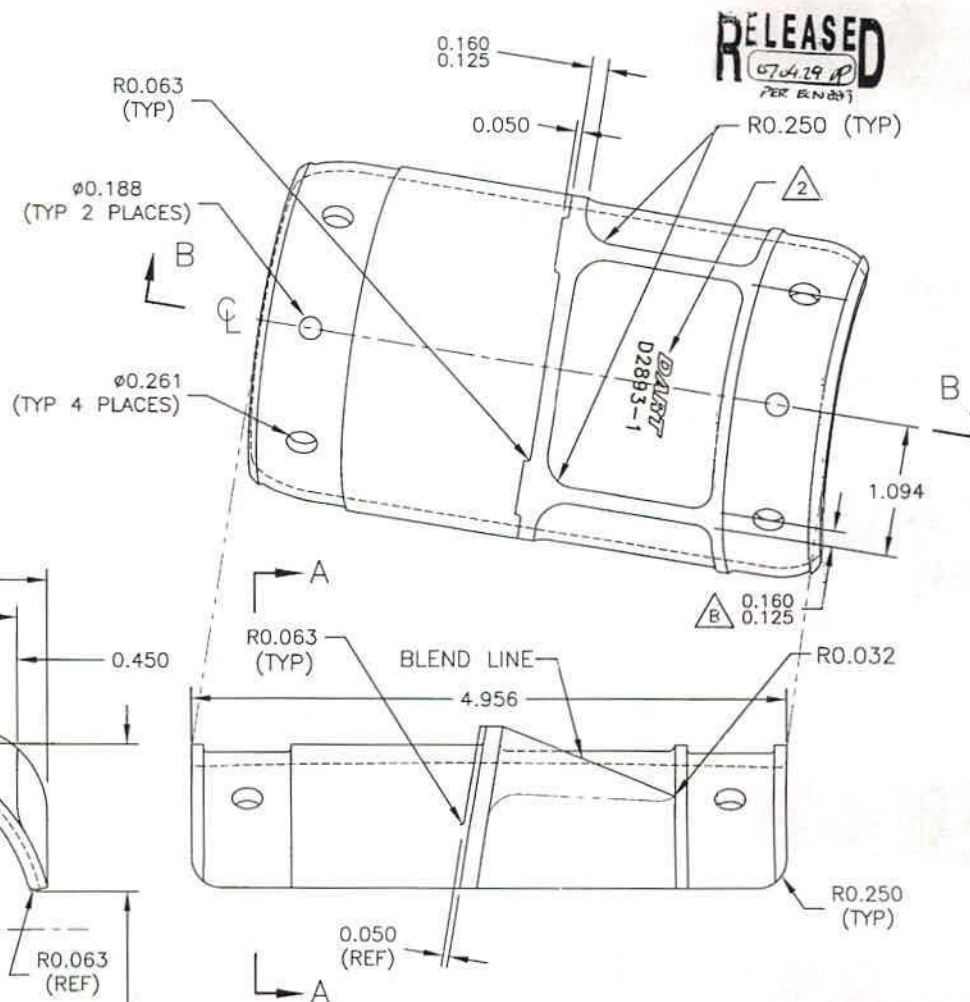
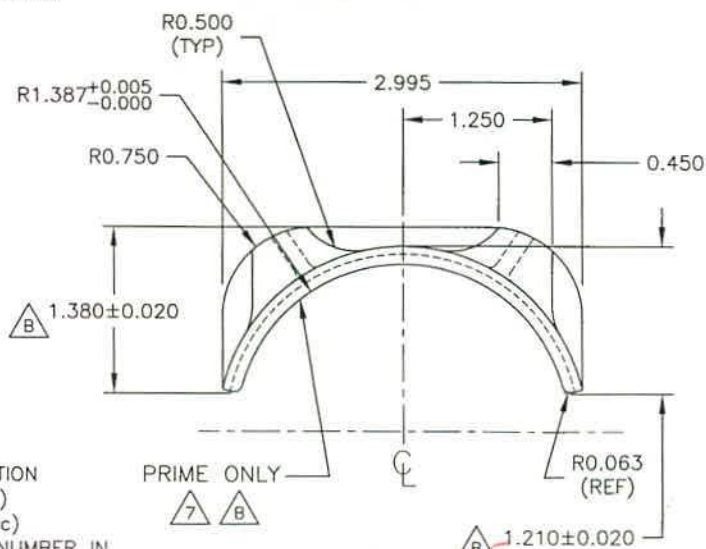
Measured by: <i>[Signature]</i>	Audited by:
Date: 07.12.30	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	07.05.08	Dimension AP revised	KJ/JLM	<i>[Signature]</i>

N1496  
T3



SECTION A-A  
TOOLING HOLE DETAIL



D2893-1

- 1) MATERIAL: 17-4 PH STAINLESS STEEL  
HEAT TREAT TO H900 CONDITION  
(900°F FOR 1 HR, AIR COOL)  
MIN UTS = 170 KSI (38 HRC)
- 2) IDENTIFY WITH DART LOGO AND PART NUMBER IN  
THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3  
PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2

NO. 35579  
WORK ORDER  
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

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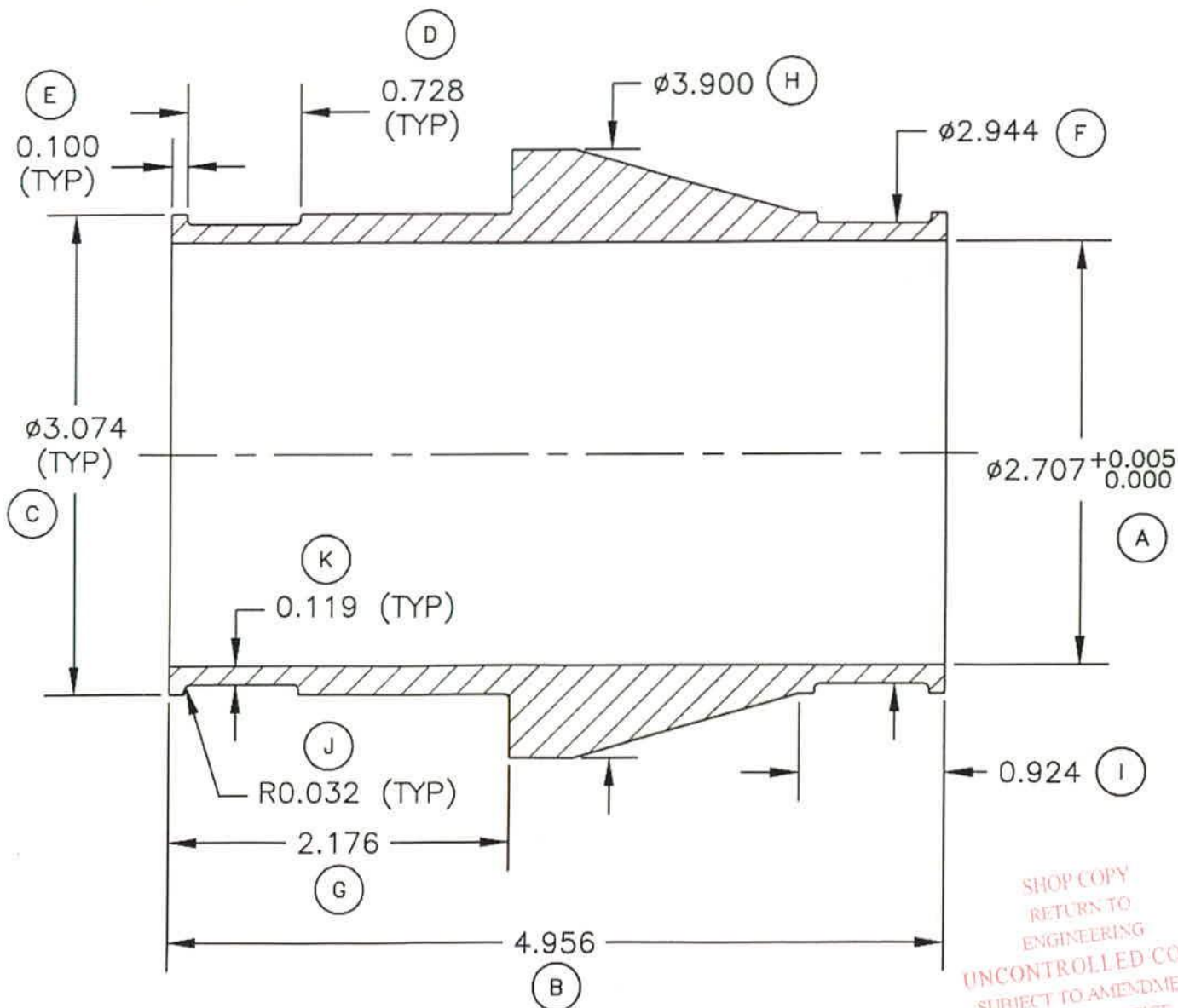
B	07.03.16	UPDATE DIMS AS MFG., PRIME INSIDE
A	01.01.10	NEW ISSUE
DESIGN	qj	DRAWN BY PH
CHECKED	#	APPROVED #
DATE	07.03.16	TITLE #2.750 SUPPORT
DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA		REV. B SHEET 1 OF 1 SCALE





DESIGN RT	DRAWN BY RT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. DSK 078	REV. A SHEET 1 OF 1
DATE 03.05.20		TITLE TURNING DETAIL FOR D2893-1	SCALE 1:1
A	03.05.20	NEW ISSUE	

RELEASED  
#03.07.01



D2893-1 TURNING DETAIL

SHOP COPY  
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UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 35579

## CERTIFICATE OF TESTS

## ABNAHMEPRUEFZEUGNIS

## CERTIFICAT DE CONTROLE

CERT SERIAL# 000614965


**TALLEY METALS**  
 A Carpenter Company

Talley Metals Technology, Inc.

205 Talley Metals Lane

McBee, SC. 29101 Tel: (610) 208-2000 (800) 338-4592

11/05/07

CUSTOMER/BESTELLER/CLIENT

A.M. CASTLE &amp; CO

3400 N WOLF RD  
FRANKLIN PARK

IL 60131

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SELLER/VERKÄUFER/VENDEUR PAGE 1 OF 2

HVL

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./MERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
10-33922-01	W74080	11/05/07	3995.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULÉE: G13688

PRODUCT DESCRIPTION: TYPE 17-4 SOLUTION ANNEALED COLD FINISH  
PART NUMBER: IAC 14996
 SPECIFICATION: CASTLE 3174-03 REV 18 (07/15/05)  
 AMS 2303 REV E (10/ /01)  
 AMS 5643 REV Q (01/ /03) (UNS S17400) (AISI 630)  
 ASTM-A564-04  
 ASME-SA564 2004 EDITION

SIZE 4.000000 IN. (101.60 MM) RD BAR

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN(XRF)	SI(XRF)	P (XRF)	S (COM)	CR(XRF)
0.03	0.85	0.36	0.026	0.026	15.27
NI(XRF)	MO(XRF)	CU(XRF)	N (FUS)	CB(XRF)	TA(XRF)
4.28	0.42	3.70	0.029	0.23	LT .01
CB-TA					
0.24					

THIS HEAT MELTED BY THE ARC/AOD PROCESSES  
NO WELD REPAIR.MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM AND ALPHA SOURCE  
CONTAMINATION.

DISCS MACROETCHED AND APPROVED

HARDNESS AS SHIPPED, HBW - 351 (MIDRADIUS)

MAGNETIC PARTICLES: FREQUENCY = 0 / SEVERITY = 0

MICROSTRUCTURE - FERRITE 1.07%

SOLUTION ANNEALED - 1900 F, 1 HOUR - RAPID COOL

CASTLE METALS CORP

DATE RCVD

IAC

APPROVED BY

CONTINUED ON NEXT PAGE

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**CERTIFICATE OF TESTS**  
 CERT SERIAL# 000614965

**ABNAHMEPRUEFZEUGNIS**
**CERTIFICAT DE CONTROLE**

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 205 Talley Metals Lane

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11/05/07

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SELLER / VERKÄUFER / VENDEUR PAGE 2 OF 2

HVL

CUSTOMER ORDER NO. / BESTELL.-NR. / N° DE COMMANDE	CARPENTER NO. / WERKS-NR. / N° DE REFERENCE INTERNE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
10-33922-01	W74080	11/05/07	3995.000

 HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE :  
 CAPABILITY

G13688

900 F( 482 C), 01 HR

AIR COOL

YIELD STRENGTH, (0.20 %) KSI(MPA)	190.0( 1310)
TENSILE STRENGTH, KSI(MPA)	211.0( 1455)
ELONGATION IN 2.00", %	14.0
REDUCTION OF AREA, %	40.0
HARDNESS, HBW	416.0

(CONVERTED FROM TENSILE STRENGTH)

NO WELD REPAIR PERFORMED

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A.

MATERIAL SUPPLIED COMPLIES WITH THE REQUIREMENTS OF DFARS 252.225.7014 (JUNE 2005) ALT.1 AND SUBSECTION 225.872.1.

WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1B OF EN 10204(DIN50049)

 STEPHANIE E. MCCULLUM  
 QUALITY ASSURANCE ENGINEER  
 CARPENTER TECHNOLOGY CORPORATION

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